

Notice of Allowability

Application No.

10/537,054

Applicant(s)

SHIBATA ET AL.

Examiner

Art Unit

Karen Masih

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-3.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892) *
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), *
- Paper No./Mail Date 6/2/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
- Paper No./Mail Date ____.
7. ☒ Examiner's Amendment/Comment .
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.


Karen Masih
Primary Examiner

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows: Abstract should be one paragraph. Page 19 delete last paragraph. Insert after period in line 4 – The invention includes inertia controls means(29) for calculating and outputting an inertia control signal T_{mjc} from an electric motor acceleration torque signal T_{mafb} obtained by multiplying a signal acquired by differentiating an electric motor mean speed signal N_{mavg} by an inertia time constant τ_m of the electric motor portion, electric motor acceleration torque control means (28) for calculating a torque command compensation signal T_{rfl} from a deviation signal of a signal T_{rfax} obtained by decreasing T_{mjc} from a torque command signal T_{rfa} and the electric motor acceleration torque signal T_{mafb} , and electric motor torque control means for controlling a current of the electric motor in order to obtain an electric motor torque in accordance with a torque command T_{rfm} to be a sum of T_{rfa} and T_{rfl} . –

In specification, one should not refer to claim number specifically, hence
page 4 line 14 delete "according "
page 4 line 15 delete " to claim 1 "

In drawings , see attached drawings marked in red ink . Prior art label is needed for figs 4-6 and boxes need to be labeled descriptively.

2. The following is an examiner's statement of reasons for allowance: Prior art does not disclose signal obtained by multiplying a signal acquired by differentiating motor means speed signal N_{avg} by an inertia time constant τ_m of the motor portion is input as an elective motor acceleration torque signal T_{mafb} to an inertia controller with respect to torque command signal T_{rfa} output form speed controller and inertia controller multiplies motor acceleration torque T_{mafb} by proportional gain and then outputs a value thus obtained as inertia control signal T_{mjc} through a second order or first order lpf and second order or first order hpf, feeds back motor acceleration torque signal T_{mafb} to motor acceleration torque command T_{rfax} obtained by decreasing inertia control signal T_{mjc} from torque command signal T_{rfa} output from speed controller and controls current of motor in order to have motor torque in accordance with a signal T_{rfm} obtained by adding to acceleration torque command T_{rfax} , a torque compensation signal T_{rfl} acquired by amplifying a signal of a deviation thereof by means of motor acceleration torque controller constituted by proportional gain and integrator , carrying out a control in order to cancel motor load torque in response to torque compensation signal T_{rfl} calculated and outputting such a manner that the torque command signal T_{rfa} output form speed controller and motor acceleration torque

feedback signal Tmafb are coincident with each other and equivalently enlarging and controlling inertia of motor portion, with respect to rest of claim .

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen Masih whose telephone number is 571-272-2068. The examiner can normally be reached on m-f 8.30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-2837. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karen Masih

Application/Control Number: 10/537,054
Art Unit: 2837

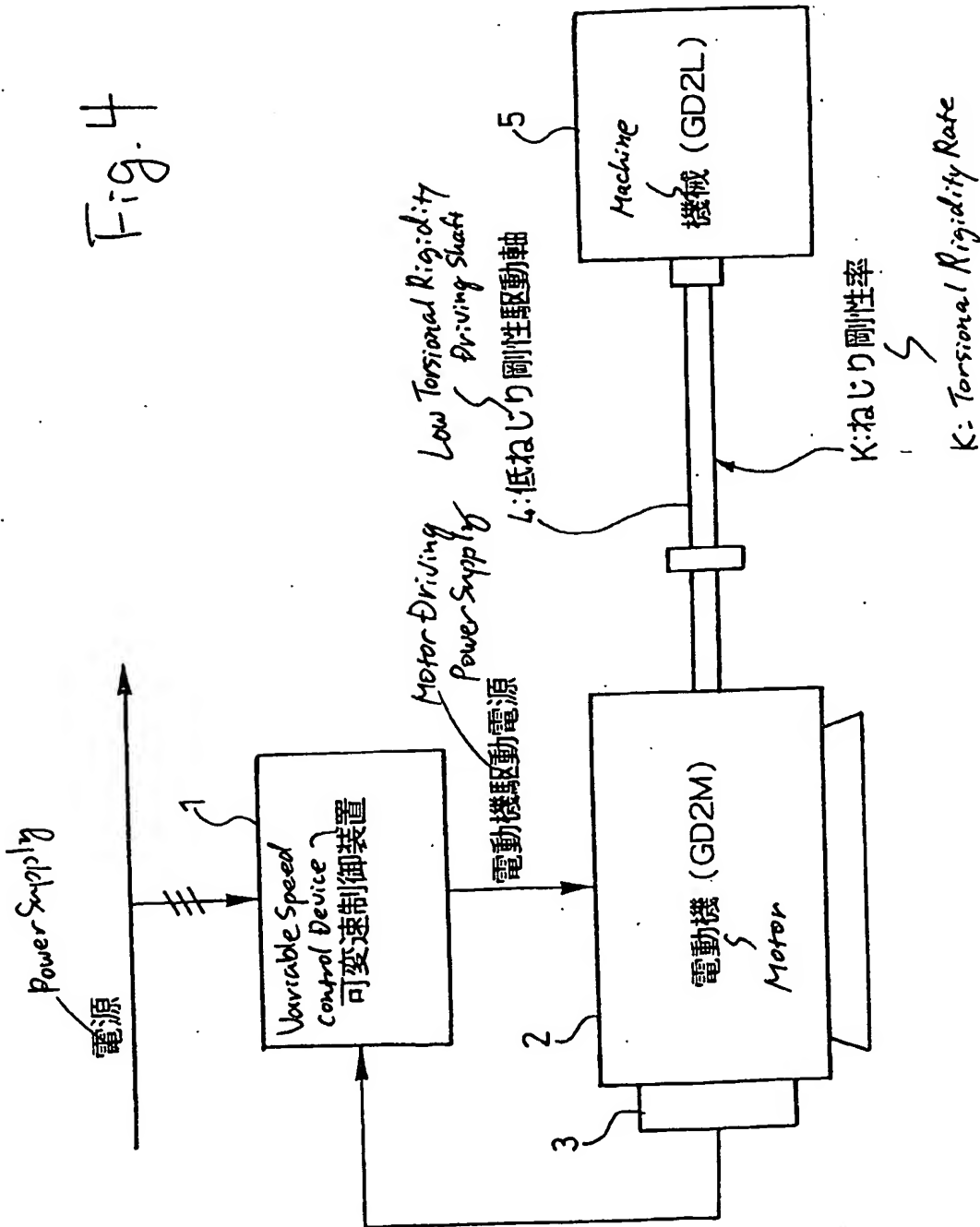
Page 5

A handwritten signature in black ink, appearing to read "M. Marshall", is written above the printed name.

Primary Examiner
Art Unit 2837

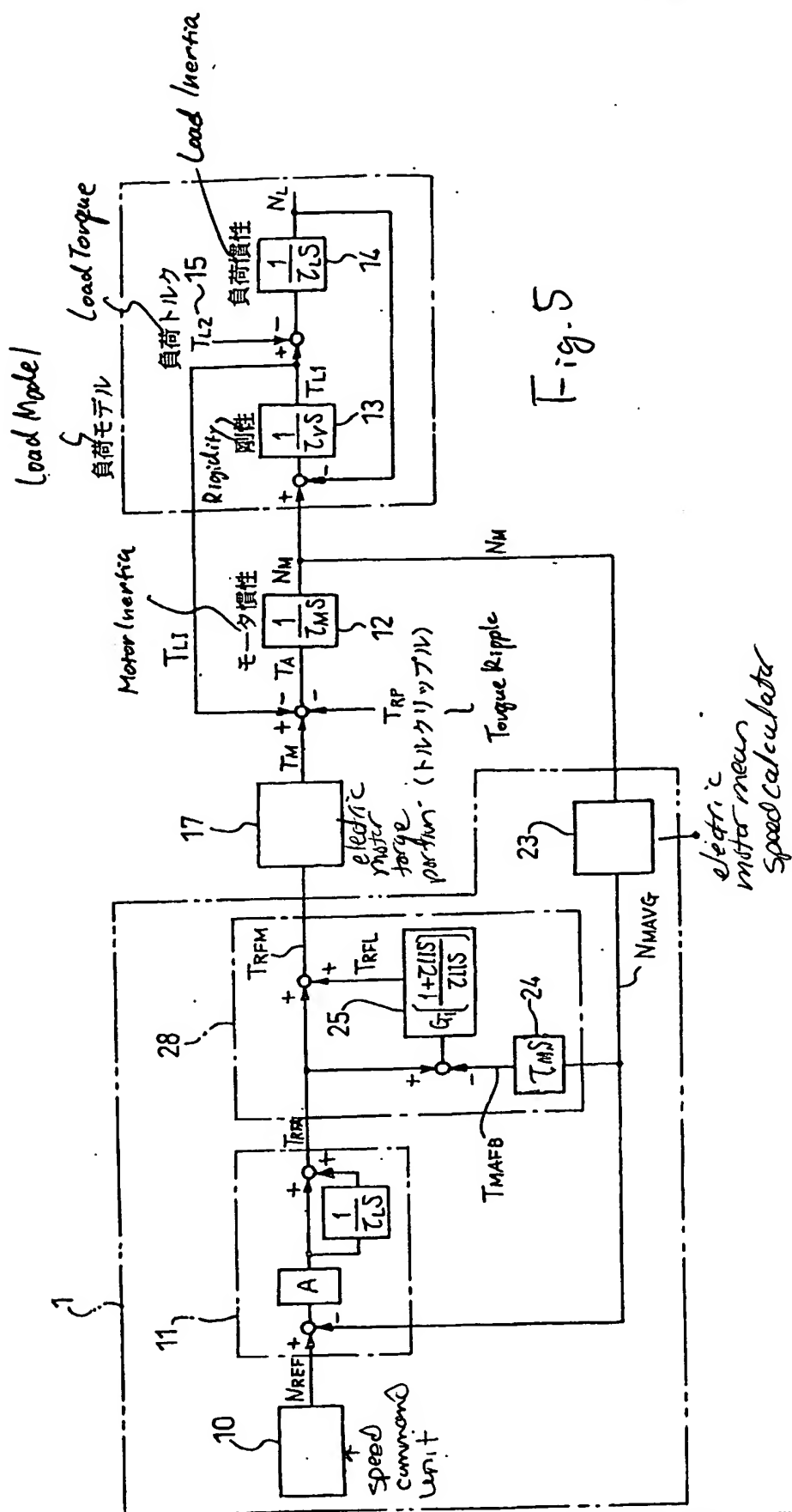
4

Fig. 4



Prior Art

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Prior Art

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6

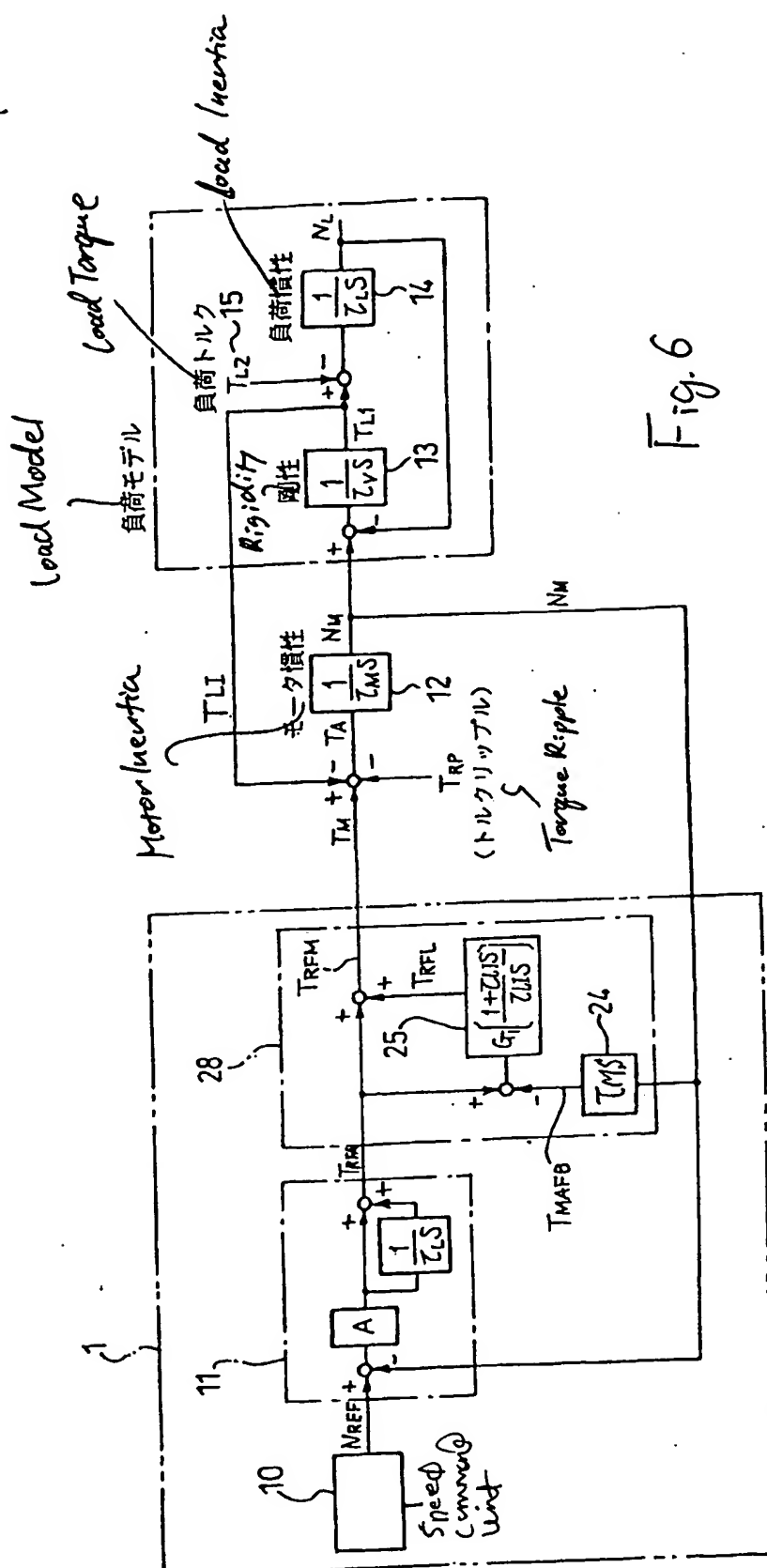


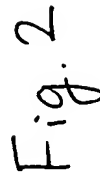
Fig. 6

Prior Art

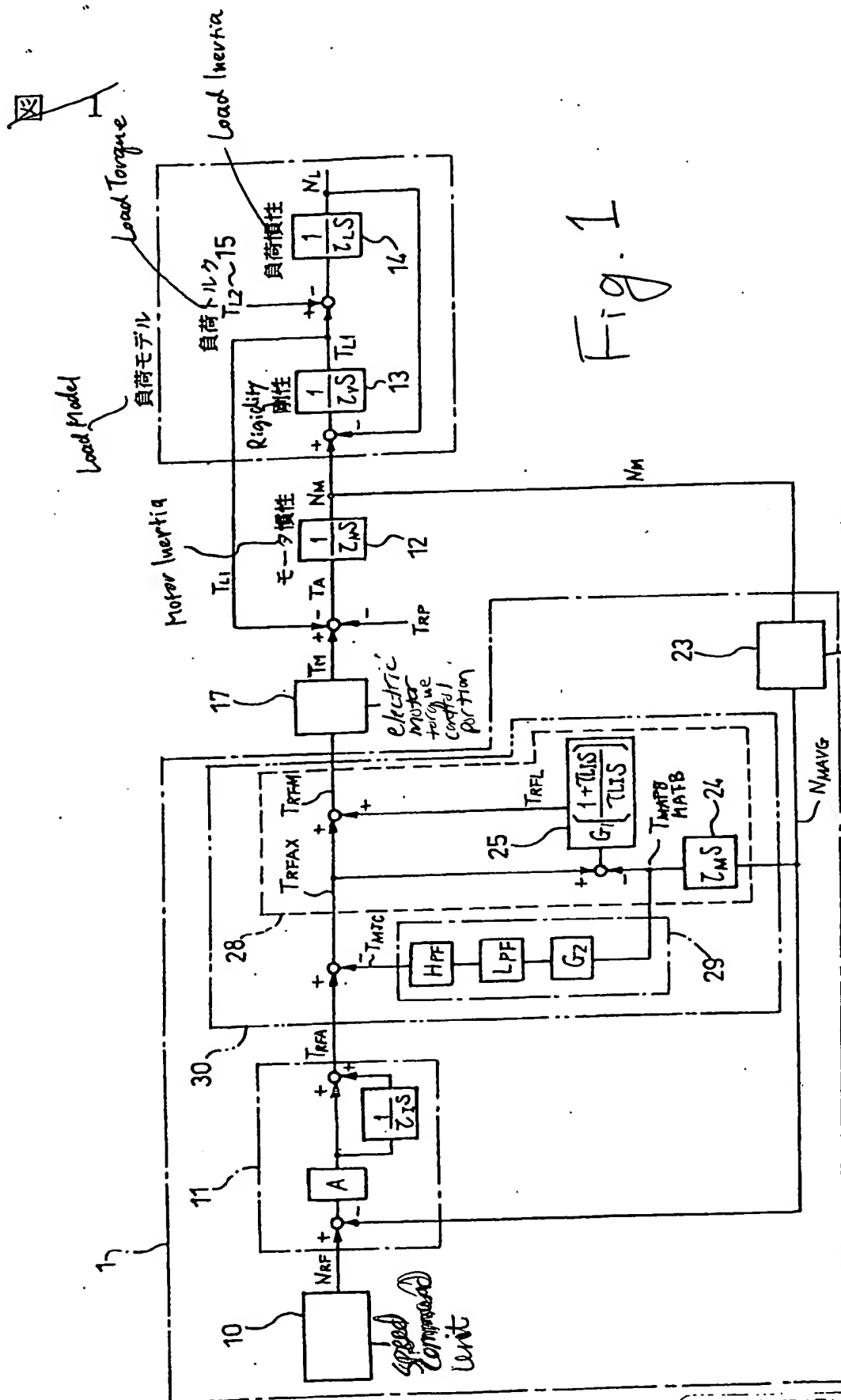
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electric motor
mean speed
calculator

Fig. 1

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